
CASE MANAGEMENT PROTOCOL FOR CARE OF THE HOME VENTILATION
PATIENT

Kentucky Medical Assistance Program

The purpose of this protocol is to communicate the optimal component of managing the ventilator dependent patient at home. The protocol will be utilized by the Kentucky Medical Assistance Program (KMAP) in approving requests for financial reimbursement for mechanical ventilators.

The placement and care of the ventilator dependent patient involves a partnership among the physician, hospital, home health agency and equipment supplier. Because of the importance of ongoing patient care in the home setting and necessity of reliable response systems, the referring hospital/physician shall consult with the home health agency prior to any selection of equipment supplier.

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I. Eligibility Criteria

The following criteria must be met for a patient to be considered for a home ventilation program. If all criteria are not met, a home ventilator shall not be installed.

A. Medical

Candidates to be considered for a home ventilation program shall be medically stable, possess a permanent tracheostomy (for positive pressure ventilation), and be generally included in, but not limited to, the following categories:

1. Injuries of the spinal cord
2. Irreversible neuromuscular disease
3. Sleep disorders
4. Chronic pulmonary disorders
5. Other neurological disorders

A person trained in the care of patients who require mechanical ventilation, (e.g., pulmonologist, neonatologist, intensivist, cardio thoracic surgeon, internist) should review the need for at home mechanical ventilation before institution.

B. Social – Environmental

1. The patient's family/primary caregiver must be capable of comprehension and performance of duties and responsibilities relative to ventilatory dependent patient care.
2. There shall be documentation of caregiver's competence in performance of patient care.
3. There shall be documentation of acceptable dwelling and physical facilities.

C. Community Resources

1. Emergency medical service.

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2. Local physician to accept patient when applicable.
3. Home Health agency (with staff trained in care of ventilator dependent patients).
4. Medical equipment supplier (with staff trained in care of ventilator dependent patients).

II. Home Ventilator Plan

The following are activities necessary for adequate ventilator dependent care. When specific behavioral objectives are stated, they must be met during the course of orientation, instruction, and treatment (unless indicated as optional by an *). The responsibilities for performance of duties to the left according to the following:

HO – Hospital from which patient will be discharged to home;
HH – Home Health agency operating within county of patient's residence;
D - Durable Medical Equipment supplier.

In case of dual responsibilities, the agency listed first shall assume responsibility for implementation.

A. Assessment

HO/HH 1. Primary caregivers shall possess the ability to accept and understand the purposes, responsibilities, risks, and benefits of home ventilator therapy.

D/HH 2. Document assessment of an adequate home environment shall be made prior to discharge to evaluate the following:

- a. Electrical capability
- b. Size of doorways and rooms
- c. Accessibility (steps, ramps, etc.)
- d. Bathroom location
- e. Availability of telephone
- f. Adequate heating and cooling
- g. Adequate refuse disposal

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- h. Acceptable area for supplies, equipment, and exercise
- HO/HH 3. Adequate family support systems and coping mechanisms shall be evaluated.
- HO/HH 4. There shall be adequate financial resources to support medical, home care, nutritional, utilities, and continued family living costs.

B. Implementation

- HO 1. The physician shall write the orders for home ventilation.
- HO 2. The caregiver shall be instructed in the following:
- HO a. Anatomy and Physiology
- HO/HH b. Nutrition and Hydration
- HO/HH c. Personal Care
- HO/HH d. Tracheostomy Care
- Site care
 - Dressing/ties/changing
 - Tube cleaning/changing/insertion
 - Emergency care
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- HO/D e. Suction Procedures
- hyperinflation/hyperoxygenation with manual ventilator (e.g. ambu bag)
 - proper tracheal and nasopharyngeal suction techniques (to include sterile technique)
 - installation of bland or medicated solution for secretion removal
- HO f. Chest Physiotherapy
- percussion/postural drainage
 - breathing retraining
- HO g. Physical Therapy

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- musculoskeletal exercise program
 - aerobic retraining program
- D/HH/HO h. Ventilator Operation
- circuit change
 - equipment cleaning/disinfection
 - checking and changing parameters
 - checking alarm system
 - safety precautions
 - checking and charging electrical back-up
 - trouble shooting
- HO/D i. Tracheostomy Collar
- humidifier/nebulizer operation
 - cleaning/disinfection
 - proper FI02 setting
 - over hydration precautions
 - tubing changes
 - maintenance of sterile/clean system
- HO j. Cardiopulmonary Resuscitation
- HO/D k. Safety Precautions
- adequate grounding
 - response to alarms
 - response to power failure
 - response to machine failure
 - recognition of early signs of respiratory distress
 - response to airway occlusion
 - prevention of barotraumas
 - prevention of infection
 - noise control
 - recognition of gastric distention
 - supervision of small children

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|-------|----|---|
| HO/HH | I. | Medications |
| | | <ul style="list-style-type: none">• name• dosages• frequencies• actions• common side effects and rationale for notification of MD or Home Health agency• contraindications |

Note: All instructions given to caregiver and patient shall be accompanied by a written procedure statement, and attached to home health referral.

C. Specific Duties

In addition to the above, those agencies and individuals shall have the following specific responsibilities;

1. Home Health Agency
 - a. Collaborate with hospital staff and equipment suppliers to assure continuity of coordinated care between hospital and home.
 - b. Organize one site visit with patient and family/caregiver prior to discharge.
 - c. Be physically present upon arrival at home.
 - d. Assess, review, and reinforce all items included in II – A and B after discharge.
 - e. Assess and assist in identifying additional resources as needed.
 - f. Encourage incorporation of patient into routine family structure and lifestyle as much as possible.
 - g. Review follow-up plans and coordinate community referrals.
 - h. Assist caregiver/family in arranging six month revaluation by discharging physician or his designee.
 - i. Have in place twenty-four hour call system
 - j. Report all pertinent findings to primary care physician as needed or every two months.
 - k. Assist with arranging transportation as needed and medically necessary.

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- l. Make changes in ventilator parameters as ordered, with immediate notification to the medical equipment suppliers.
 - m. Provide other supplies not available from supplier or included in ventilator units.
 - n. Provide written notification of presence of ventilator patient to area electric, fire and telephone services.
- 2. Medical Equipment Supplier
 - a. Supply a ventilator available for patient to use 7 to 14 days prior to discharge.
 - b. Maintain accurate documentation of ventilator parameters.
 - c. Make changes in ventilator parameters as ordered with immediate verbal and written notification to the Home Health agency.
 - d. Provide supplies necessary as ventilator adjuncts to assure complete ventilator operation.
 - e. Provide twenty-four hour call with one hour response for equipment repair or replacement.
 - f. Maintain available services of a respiratory therapist or respiratory therapy technician as identified by the National Board of Respiratory Care.
 - g. Provide twenty-four hour electrical source.
 - h. Provide manual ventilator source (with or without supplemental oxygen as ordered).
 - i. Perform routine maintenance as specified by manufacturer or company protocol and assure proper equipment function.
 - j. Provide functionally safe alarm systems.
 - k. Provide personnel and equipment for transport of patient from hospital.
 - l. Visit patient a minimum of every week during the first month and monthly after the initial month.
 - m. Review cleaning/sterilization techniques with caregiver.
 - n. Provide home health patient with written instructions/trouble shooting guide.
 - o. Reinforce knowledge of generator operations with caregiver and provide written guide for patient.

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- p. Provide written notification of presence of ventilator patient to area electric, fire and telephone services.

3. Physician

- a. The discharging physician shall write all ventilator orders and discharge orders. These shall be communicated to the primary care (community) physician where applicable.
- b. The discharging physician will provide period six month case review (or assign to another physician, e.g., primary care physician).
- c. The primary care physician may assume total patient care which may include or exclude six month care review, at the discretion of the discharging physician.